INCH-POUND

MIL-DTL-55302/130D
9 January 2004
SUPERSEDING
MIL-C-55302/130C
29 April 1993

DETAIL SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES: RECEPTACLES, 90 THROUGH 240 CONTACT POSITIONS, FOR PRINTED WIRING BOARDS (.100 SPACING)

This specification is approved for used by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-55302.

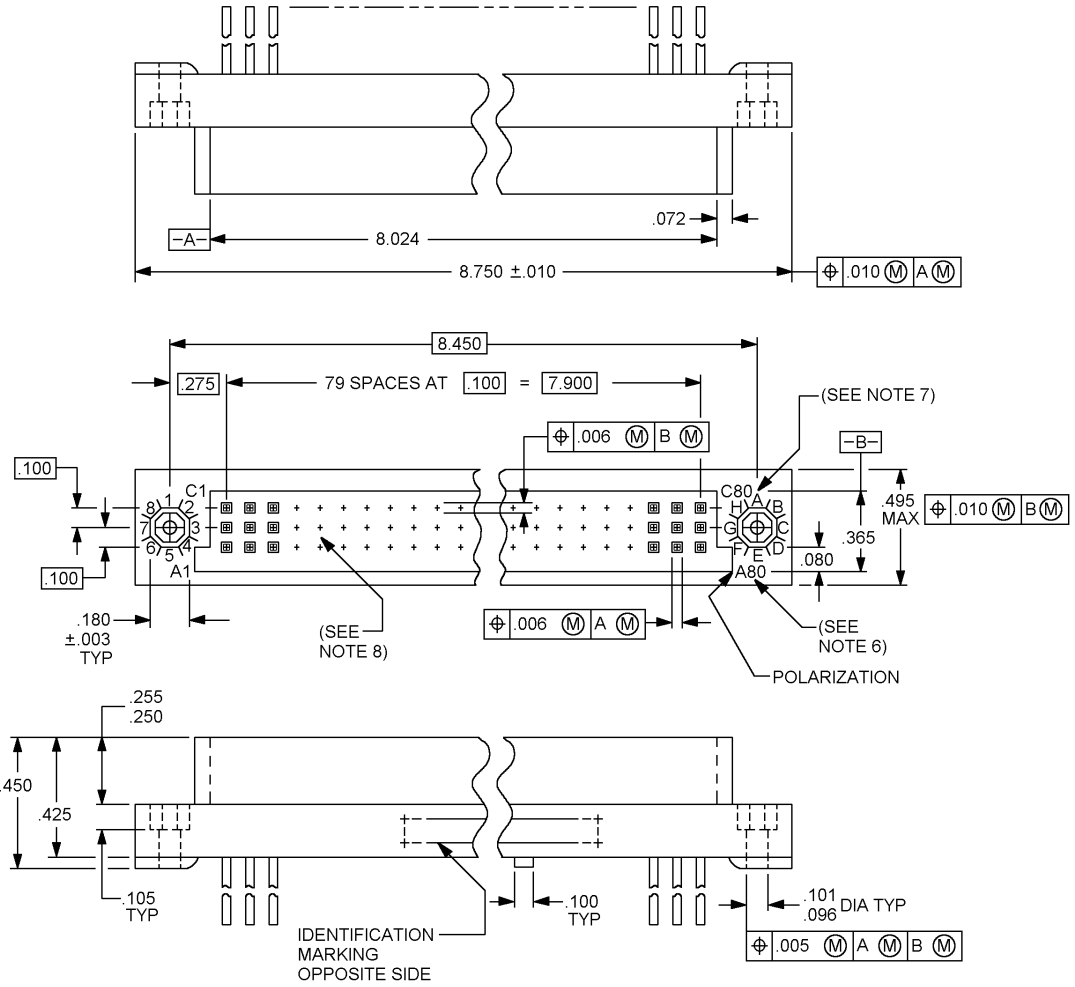


FIGURE 1. Connectors, kit receptacle, .100 (25.4 mm) spacing, 160 and 240 contacts.

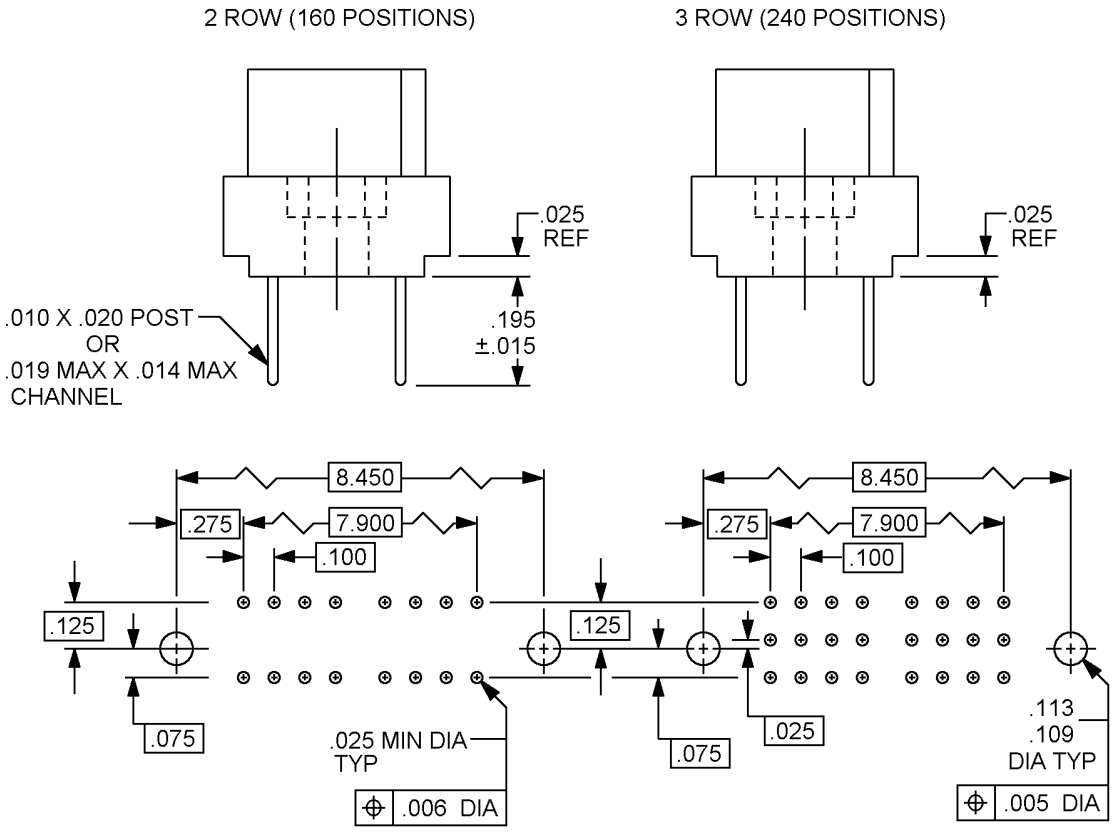


FIGURE 1. Connectors, kit receptacle, .100 (25.4 mm) spacing, 160 and 240 contacts - Continued.

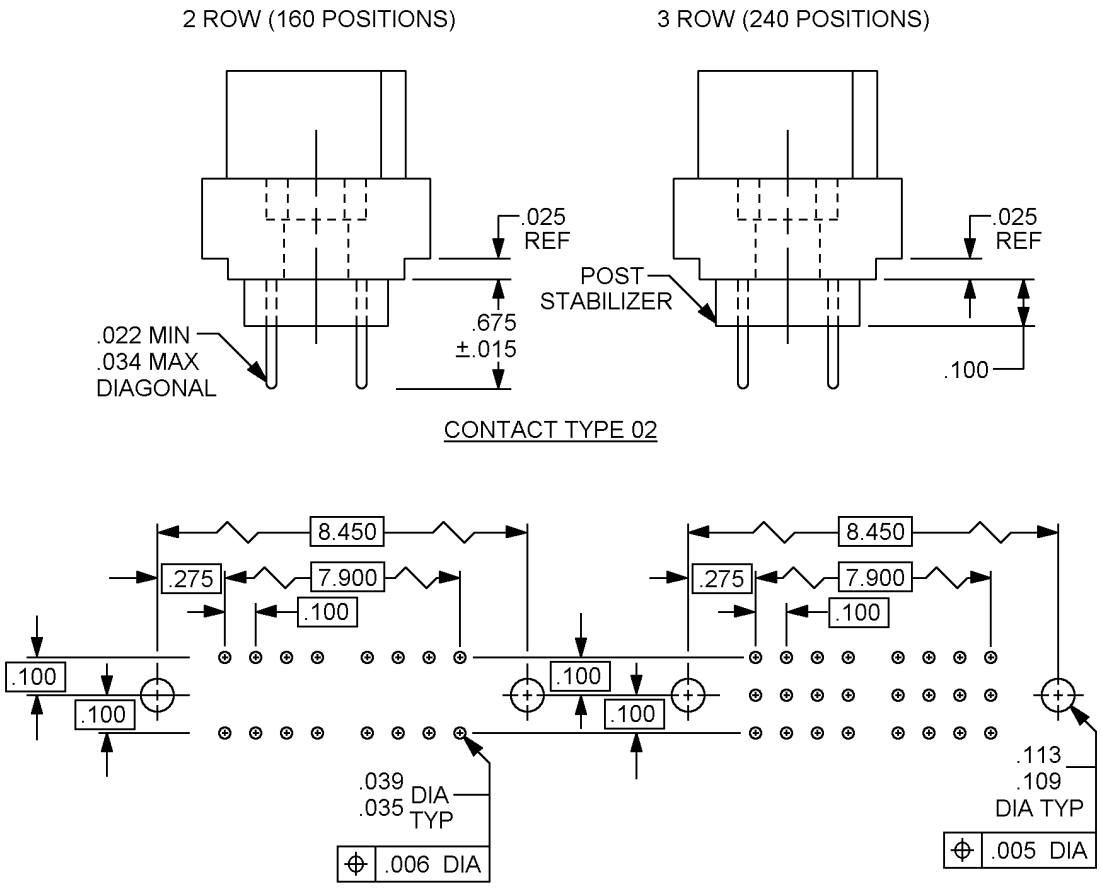
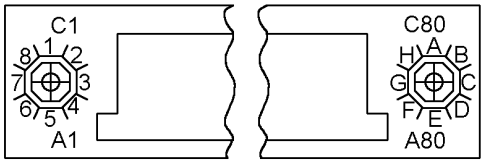
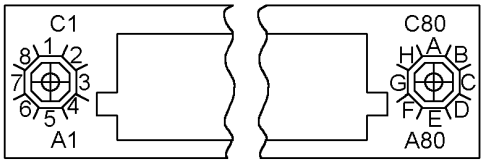


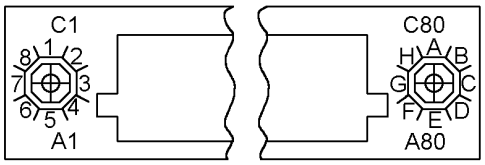
FIGURE 1. Connectors, kit receptacle, .100 (25.4 mm) spacing, 160 and 240 contacts - Continued.



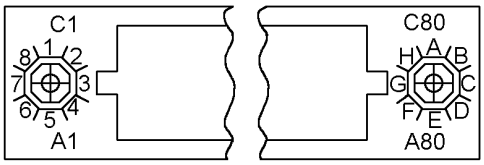
TYPE I



TYPE II



TYPE III



TYPE IV

POLARIZATION

Inches	mm	Inches	mm	Inches	mm
.003	0.08	.072	1.83	.225	6.35
.005	0.13	.075	1.91	.250	6.48
.006	0.15	.080	2.03	.275	6.99
.010	0.25	.082	2.08	.365	9.27
.014	0.36	.096	2.44	.425	10.80
.015	0.38	.100	2.54	.450	11.43
.019	0.48	.101	2.57	.495	12.57
.020	0.51	.105	2.67	.675	17.15
.022	0.56	.109	2.77	7.900	200.66
.025	0.64	.113	2.87	8.024	203.81
.034	0.86	.125	3.18	8.450	214.63
.035	0.89	.180	4.57	8.750	222.25
.039	0.99	.195	4.95	8.780	223.01

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are ±.005 (0.13 mm) on decimals and ±2º.
4. These connectors mate with connectors specified in MIL-DTL-55302/129.
5. Use printed circuit boards with both the type 1 and type 2 receptacles.
6. Numbers indicating end cavities and letters indicating rows marked or molded this surface.
7. Locations indicators embossed on surface.
8. Lines indicate every five cavities marked or molded on mating face except end cavities.

FIGURE 1. Connectors, kit receptacle, .100 (25.4 mm) spacing, 160 and 240 contacts - Continued.

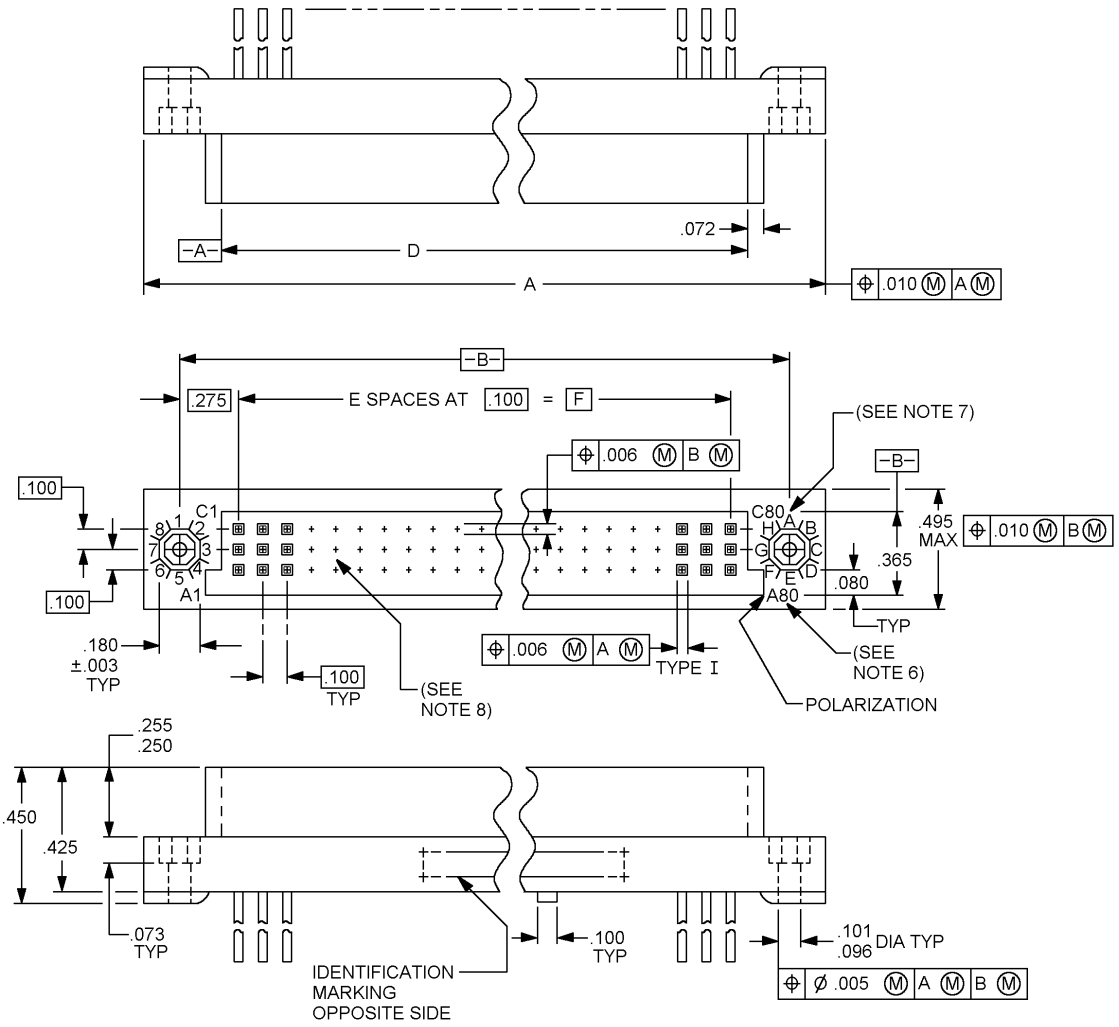
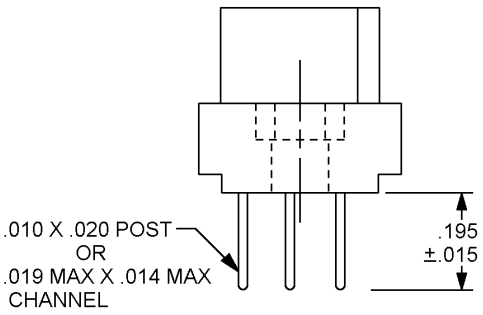
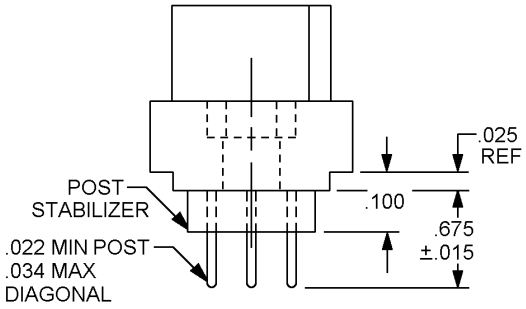


FIGURE 2. Connectors, kit receptacle, .100 (25.4 mm) spacing, 90 through 240 contacts positions.



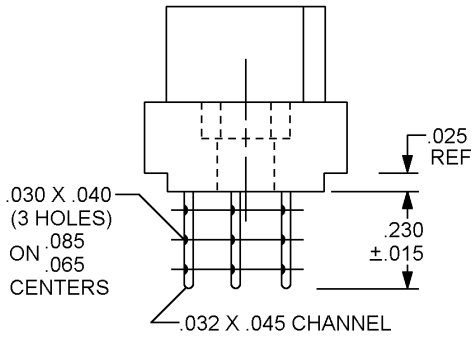
FLOW SOLDER TYPE

CONTACT TYPE 1



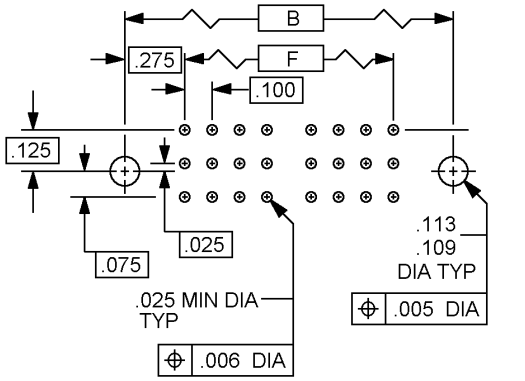
RACK MOUNT
WIRE WRAPPED TYPE

CONTACT TYPE 2



EYELET CONTACT
(SOLDER)
NO. 26 AWG MAX

CONTACT TYPE 3



RECOMMENDED PRINTED CIRCUIT BOARD LAYOUT
CONNECTOR SIDE, FLOW SOLDER TYPE

CONTACT TYPE 1

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Unless otherwise specified, tolerances are ±.005 (0.13 mm) on decimals and ±2º.
4. These connectors mate with connectors specified in MIL-DTL-55302/129.
5. Use printed circuit boards with both the type 1 and type 2 receptacles.
6. Numbers indicating end cavities and letters indicating rows marked or molded this surface.
7. Locations indicators embossed on surface.
8. Lines indicate every five cavities marked or molded on mating face except end cavities.

FIGURE 2. Connectors, kit receptacle, .100 (25.4 mm) spacing, 90 through 240 contacts positions - Continued.

TABLE I. Dash number; polarization type, contact type for 160 and 240 contact positions. (See figure 1)

Dash number	Number of contacts	Polarization type	Contact type
01	160	I	1
02	160	I	2
03	160	II	1
04	160	II	2
05	160	III	1
06	160	III	2
07	160	IV	1
08	160	IV	2
09	240	I	1
10	240	I	2
11	240	II	1
12	240	II	2
13	240	III	1
14	240	III	2
15	240	IV	1
16	240	IV	2

TABLE II. Dash numbers and dimensions for 90 through 240 contact positions. (See figure 2)

Dash number	Number of contacts	Contact type	A	B	D	E	F	Contact identification number	Polarization type
17 18 19	90	1 2 3	3.750 (95.25)	3.450 (87.63)	3.024 (76.81)	29	2.900 (73.66)	1-30	I
20 21 22	105	1 2 3	4.250 (107.95)	3.950 (100.33)	3.524 (89.51)	34	3.400 (86.36)	1-35	I
23 24 25	120	1 2 3	4.750 (120.65)	4.450 (113.03)	4.024 (102.21)	39	3.900 (99.06)	1-40	I
26 27 28	135	1 2 3	5.250 (133.35)	4.950 (125.73)	4.524 (115.57)	44	4.400 (111.76)	1-45	I
29 30 31	150	1 2 3	5.750 (146.05)	5.450 (138.43)	5.024 (127.61)	49	4.900 (124.46)	1-50	I
32 33 34	165	1 2 3	6.250 (158.75)	5.950 (151.13)	5.524 (140.37)	54	5.400 (137.16)	1-55	I
35 36 37	180	1 2 3	6.750 (171.45)	6.450 (163.83)	6.024 (153.01)	59	5.900 (149.86)	1-60	I
38 39 40	195	1 2 3	7.250 (184.15)	6.950 (176.53)	6.524 (166.37)	64	6.400 (162.56)	1-65	I
41 42 43	210	1 2 3	7.750 (196.85)	7.450 (189.23)	7.024 (178.41)	69	6.900 (175.26)	1-70	I
44 45 46	240	1 2 3	8.750 (222.25)	8.450 (214.63)	8.024 (203.81)	79	7.900 (200.66)	1-80	I

REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figures 1 and 2, and tables I and II.

Insulator body: Insulator material shall be in accordance with MIL-DTL-55302 or ASTM D5138 type LCP0120G30A43430 EA300ED035EE200EF140 or MIL-M-24519 type GLCP-30F.

Contact material: Contact material shall be in accordance with MIL-DTL-55302 or beryllium copper alloy C17400 in accordance with ASTM B768.

Plating: Types 1, 2, and 3 shall be nickel plated in accordance with MIL-DTL-55302. Over the nickel plate, the mating engagement area of types 1 and 3 for a minimum length of .100 inch and the entire contact type 2 shall be gold plated in accordance with MIL-DTL-55302. Over the nickel plate, the solder tail area for types 1 and 3 shall be tin-lead plated for .215 (5.46 mm) and .245 (6.22 mm) inch, respectively in accordance MIL-DTL-55302.

Contact identification: See figure 1 and 2, and tables I and II.

Contact rating: 3.0 Amperes, maximum per contact; 2.25 amperes continuous per contact at 75ºF.

Keying: See MIL-DTL-55302/31.

Dash numbers -01 through -016: Two keys, Part or Identifying Number (PIN) M55302/31-08, and two key mounting hardware, PIN M55302/31-09, packaged with connectors.

Dash numbers -17 through -46: Key, PIN M55302/31-04, with .086-56 UNC-2A mounting screw is recommended.

Replacement contacts: See MIL-DTL-55302/32.

Contact removal: See MIL-I-81969/9 for contact types 1 and 3. Use Tyco Electronics 1-265871-7 tool for contact type 2.

Mating and unmating: The maximum mating force in pounds shall be the number of contacts multiplied by 0 .25; the withdrawal force in pounds shall be a minimum of .025 times the number of contacts and shall not exceed the measured insertion force.

Contact resistance: No individual contact pair shall have resistance exceeding 0.020 ohm.

Contact retention: 3 pounds, minimum.

Dielectric withstanding voltage:

Sea level: 900 volts rms.

High altitude: 200 volts rms.

Resistance to test probe damage: The connector shall meet the requirements of MIL-DTL-55302/30.

Contact separation force: The connector shall meet the requirements of MIL-DTL-55302/29.

Oversized pin exclusion: .0465 diameter pin.

PIN: M55302/130 - (and dash number from table l for 160 and 240 contact positions).

M55302/130 - (and dash number from table ll for 90 through 240 contact positions).

Patent number 3,404,367. The Government has a royalty free license under this patent for the benefit of manufacturers of the item either for the Government of for use in equipment to be delivered to the Government.

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Referenced documents. In addition to MIL-DTL-55302, this document references the following:

MIL-DTL-55302/29
MIL-DTL-55302/30
MIL-DTL-55302/31
MIL-DTL-55302/32
MIL-DTL-55302/129
MIL-I-81969/9
MIL-M-24519
ASTM B768
ASTM D5138

CONCLUDING MATERIAL

Custodians:
Navy - EC
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-4554-000)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at www.dodssp.daps.mil.